

WHAT IS CLAIMED IS:

1 1. A patient care and communication system which
comprises:

 a central station having means for facilitating
visual and data communications relating to patient care; and

5 a plurality of remote stations linked to said
central station and having a processor for facilitating
visual and data communications relating to patient care and
having a display for displaying said visual communications;
and

10 a private branch exchange connected to a telephone
exchange and to a plurality of telephones for facilitating
telephone communication between said telephones and said
exchange;

15 wherein said central station facilitates said
visual and data communications between said plurality of
remote stations, and includes means for determining which of
said plurality of remote stations are transmitting said
visual and data communications and which of said plurality
20 of remote stations are to receive said visual and data
communications, and includes means for establishing a
communication link between said transmitting stations and
said receiving stations;

 wherein each of said plurality of remote stations
25 includes telephone circuitry connected to said private-
branch exchange for telephone communications therebetween.

 2. The patient care and communication system;
according to claim 1, wherein said plurality of remote
stations includes control stations and patient stations.

30 3. The patient care and communication system
according to claim 2, wherein said plurality of remote
stations includes staff stations.

1 4. The patient care and communication system
according to claim 1, wherein at least a portion of said
plurality of remote stations are configured and adapted for
association in a group network such that predefined visual
5 and data signal communications are transmitted to each
station in the group by said central station and audio
communications are transmitted by said private-branch
exchange.

10 5. The patient care and communication system
according to claim 3, wherein said central station includes
means for directing said private-branch exchange to
establish audio communication between a predetermined number
of said control stations and a predetermined number of said
patient stations and a predetermined number of said staff
15 stations.

20 6. The patient care and communication system
according to claim 1 further comprising zone controller
means for interfacing said central station to said
transmitting and receiving stations for data communications
therebetween.

25 7. The patient care and communication system
according to claim 2, wherein said patient stations include
patient control means connected thereto, said patient
control means including a keypad, a speaker and a microphone
for telephone communications.

30 8. The patient care and communication system
according to claim 2, wherein said central station includes
means for directing said private-exchange to activate audio
communications between said control stations and a
predetermined number of said patient stations to facilitate
audio monitoring of patient rooms from said control
stations.

1 9. The patient care and communication system
according to claim 2, wherein said control stations comprise
a microprocessor for controlling the operation of said
control stations and said PBX interface means, memory means
5 connected to said microprocessor for storing programs and
data, peripheral interface means for interfacing said
microprocessor to peripheral equipment so as to facilitate
the input and output of said visual and data signal
communications.

10 10. The patient care and communication system
according to claim 2 further comprising locating means
linked to said central station for determining the location
of staff members and transferring said staff location data
to said central station so as to facilitate visual and data
15 communications between said control stations and said
patient stations provided at the detected location of the
staff members, said central station directing said private-
branch exchange to activate audio communication between said
control stations and said patient station at said detected
20 location.

20 11. The patient care and communication system
according to claim 1, wherein said plurality of remote
stations include receivers adapted to receive and convert
infrared transmissions to electrical signals.

25 12. The patient care and communication system
according to claim 11 further comprising a portable
transmitter adapted to be releasably attached to an object,
said transmitter being adapted for infrared transmission.

30 13. The patient care and communication system
according to claim 12 wherein said portable transmitter
includes a housing and a processor within said housing.

1 14. The patient care and communication system
according to claim 13 wherein said portable transmitter
includes a patient select member connected to said processor
to permit persons within a room to control environmental
facilities within the room.

5 15. The patient care and communication system
according to claim 12 wherein said portable transmitter
transmits data substantially periodically to said remote
stations so as to provide said central station with
information reflecting the status of said portable
10 transmitter.

15 16. The patient care and communication system
according to claim 15, wherein said status information
includes a message that the portable transmitter is
operational.

17. The patient care and communication system
according to claim 15, wherein said status information
includes battery charge data.

20 18. The patient care and communication system
according to claim 13, wherein said housing includes a slot
configured to receive a personnel card, said housing having
at least one electrical contact connected to said processor
and said personnel card having at least one electrical
contact engagable with said at least one housing contact to
25 permit the transmission of data between said personnel card
and said processor.

30 19. The patient care and communication system
according to claim 18, wherein said personnel card includes
an identifier circuit which transfers validation data to
said processor, wherein said processor determines if the
validation code is valid so as to activate said transmitter
and permit the person in possession of said card to use said
portable transmitter.

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1 20. A patient care and communication system which comprises:

a central station having a processor for facilitating visual and data signal communications relating to patient care;

5 a private-branch exchange coupled to said central station;

at least one patient station having a processor which facilitates visual and data signal communications relating to patient care, a display to display text received from said data signal communications and telephone circuitry coupled to said private-branch exchange for telephone communications between stations; and

10 at least one control station having a processor which facilitates visual and data signal communications relating to patient care, a display for displaying text received from said data signal communications and a PBX interface coupled to said private-branch exchange for telephone communications between stations;

15 wherein said processor of said central station facilitates said visual and data signal communications between said at least one patient station, and said at least one control station, and determines which of said at least one patient station or said at least one control station is transmitting said visual and data signals and which of said stations are to receive said visual and data signals, and establishes a communication link between said transmitting stations and said receiving stations.

20 21. The patient care and communication system according to claim 20 further comprising at least one staff station having a processor which facilitates visual and data signal communications relating to patient care, a display for displaying text received from said data signal

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1 communications and telephone circuitry coupled to said
private-branch exchange for telephone communication between
stations.

22. A patient care and communication system which
comprises:

5 a central station having means for facilitating
visual and data communications relating to patient care; and
a plurality of remote stations linked to said
central station and having processing means for facilitating
visual and data communications relating to patient care and
10 having display means for displaying said visual
communications, each of said plurality of remote stations
includes a receiver adapted to receive transmitted signals
for data communication to said central station;

15 a private branch exchange connected to a telephone
exchange and to a plurality of telephones for facilitating
telephone communication between said telephones and said
exchange;

20 wherein each of said plurality of remote stations
includes telephone circuitry connected to said private-
branch exchange for telephone communications therebetween;
and

25 at least one portable transmitter adapted to be
worn by personnel in a facility, said transmitter being
adapted for transmission of signals including the identity
of the personnel;

30 wherein said central station includes means for
determining the identity and location of the personnel
associated with said at least one transmitter in response to
said transmitted signals.

23. The patient care and communication system
1 according to claim 22, wherein said central station
facilitates said visual and data communications, including
said received transmitted signals, between said plurality of
remote stations, and includes means for determining which of
5 said plurality of remote stations are transmitting said
visual and data communications and for establishing a
communication link between a transmitting remote station and
a remote station in the determined location of the person.

24. A method of providing patient care and
10 communication between patient rooms and nurse stations in a
health care facility comprising:

connecting a plurality of remote stations to a
central processor so as to facilitate visual and data
communications therebetween, said plurality of remote
15 stations having processing means for facilitating said
visual and data communications and having display means for
displaying said visual communications, and said central
processor having means for determining which of said
plurality of remote stations are transmitting said visual
20 and data communications and which of said plurality of
remote stations are to receive said visual and data
communications, and having means for establishing a
communication link between said transmitting stations and
said receiving stations;

25 connecting said plurality of remote stations and
said central processor to a private-branch exchange for
audio communications between said stations.

positioning at least one of said plurality of
remote stations in each patient room located within the
30 health care facility;

1 positioning at least one of said plurality of
remote stations in each nurse station of said health care
facility;

5 attending said remote station in each nurse
station to receive said visual and data signals from said
central processor and audio signals from said private-branch
exchange; and

responding to said audio, visual and data signals.

10 25. Apparatus for remotely controlling
environmental facilities within a room of a health care
facility, which comprises:

a wireless receiver positioned within said room
having environmental facilities therewithin;

15 a wireless transmitter located within said room,
said wireless transmitter having a housing, a processor
within said housing and a patient select member connected to
said processor, such that activation of said patient select
member causes said wireless transmitter to transmit control
data to said wireless receiver; and

20 a controller connected to said wireless receiver
and said environmental facilities, said controller being
configured to receive said control data from said wireless
receiver and to control said environmental facilities in
response to said control data.

25 26. The apparatus according to claim 25, wherein
said environmental facilities include a thermostat.

30 27. The apparatus according to claim 26, wherein
said thermostat is portable and includes a wireless
transmitter to transmit temperature data to said controller
to permit the controller to regulate ambient temperature
within said room.

1 28. The apparatus according to claim 25, wherein
said wireless receiver comprises an infrared receiver and
said wireless transmitter comprises an infrared transmitter.

5 29. The apparatus according to claim 25, wherein
said wireless transmitter includes a connector which
facilitates connection of said wireless transmitter to
medical equipment, reception of status data from said
medical equipment and transmission of said status data to
said wireless receiver.

10 30. A method for controlling environmental
facilities within rooms of a health care facility,
comprising:

 positioning a wireless receiver within rooms
having environmental facilities therewithin;

15 positioning a portable wireless transmitter within
the rooms;

 connecting said wireless receiver and said
environmental facilities to a controller, said controller
being configured to receive control data from said wireless
receiver and to control said environmental facilities in
20 response to said control data; and

 activating said wireless transmitter to transmit
said control data.

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